16. Shell oval, umbonal region inflated, beaks prominent, posterior ridge rounded . . . . . *propinqua.*
Shell subquadrate, umbonal region compressed, beaks flattened, posterior ridge biangulate . . . . . *biemarginata.*

17. Shell larger, solid, margin of marsupial expansion simple. 18.
Shell much smaller, thinner, margin of marsupial expansion dentate . . . . . .19.

18. Shell subquadrate, marsupial expansion small, posterior margin subtruncate, umbonal region greatly inflated. *sampsoni.*
Shell oval, marsupial expansion larger, posterior margin regularly rounded, umbonal region less inflated . *rangiana.*

19. Shell obovate, marsupial expansion extending below the base line, beaks depressed, dorsal slope rounded . *florentina.*
Shell subtriangular, marsupial expansion not extending below the base line, beaks prominent, dorsal margin elevated . . . . . *deviata.*

SHELLS FROM THE BAY OF CADIZ REGION.

BY MAXWELL SMITH.

While on a recent visit to Spain I arranged to spend three days on the shores of the Bay of Cadiz in hopes of contributing toward the knowledge of its molluscan fauna. With the limited time at my disposal only a superficial inspection of the beaches could be made, but the results were so satisfactory, although yielding only a comparatively small series of species, that I felt that I was indeed amply repaid.

By comparing the list which follows this article it will be seen that the material brought together is a curious mixture of Mediterranean, African and Atlantic shells. Just what lives in the bay, and what not, can only be determined by careful dredgings.

Through the kindness of Mrs. Whishaw, of Seville, her summer home, an old palace dating from the 16th century, was placed at our disposal. This was located on the shore of the Bay of Cadiz at the town of Port Saint Mary, or Puerto de la Santa Maria as it is called in Spanish.

It was on April 30 of this year that we left the heat of Seville and rode by train through this rich wine-growing section of the country down to the bay. Port Saint Mary was found to be a typical Spanish

town, with its one long, wide street lined with whitewashed houses and palaces of better days. It is a sleepy town all day, when the sun shines week in and week out, but at sunset there is a change. The inhabitants throng the streets, and the men loading the steamers along the river side with sherry work harder than ever. Most of this goes to America, and comes from near Jerez, upstream. It is brought down by river or railway from the country and transferred to an ocean-going freighter at Port Saint Mary. This seems to be the only industry of the place besides fishing. At this season of the year few shell fish were offered for sale at the market.

Port Saint Mary was far from a dull place to me, as it might have proved to some persons. Every moment was occupied in searching the beaches, the tide flats and the infrequent bits of rock.

It was the day after I arrived that I made an excellent "find." A long search had been made for minute species with little success when I came across the following: A small cup-shaped depression was observed in the sand, over which ran several streamlets. This was filled with thousands, perhaps tens of thousands, of minute shells all in perfect preservation. As the tide was rapidly coming in the only thing to do was to gather together as much of the material as was possible and bring along. This was done, and it required many hours of following days to work the lot out.

Upon my return to Seville a few days later Mrs. Whishaw kindly gave me a number of species which she had obtained herself on the beaches. Those of the lot, which I had not taken myself, I have incorporated in the appended list.

Several walks were made to distant portions of the shore line. These have been noted in the list, giving the name of the nearest town.

To Mrs. Whishaw I owe many thanks for help and suggestions, besides a series of local material from the bay taking during the last few summers. In preparing the following catalogue I am especially indebted also to Monsieurs Lamy and Germain, of the Malacological Laboratory, of Paris, for assistance in determinations.

Cephalopoda.

Sepia officinalis L. A few.

Spirula pronii Lam. Mrs. Whishaw, several shells.

GASTROPODA.

Helix apicina Lk. On the ground.

Helix barbula Charp. On plants and cacti. Puerto Real.

Helix lactea Müll. Common at the roots of dwarf palms. Near Puerto Real.

Helix marmorata Fer. Ascends walls of houses at Port Mary, doubtless feeding on lime.

Helix nemausensis Bgt. One example.

Alexia myosotis Drap. Puerto Real, on mud flats, dead.

Alexia firmini Payr. Two Examples. Puerto Real.

Siphonaria algesirae Q. & G. Beaches. Not rare.

Bulla striata Brug. From the number of dead shells this must live in the bay.

Haminea elegans Leach. Several.

Conus mediterranea Hw. Not plentiful.

Mangilia vauquelini Payr. Brown-banded form.

Surcula undatirugata Biv. Mrs. Whishaw.

Clathurella linearis Mtg. A distinct little species.

Marginella miliaria L. Numerous in drift.

Marginella philippii Mont. With the latter.

Cymbium olla L. Mrs. Whishaw, several.

Pisania maculosa Lk. Not common.

Pisania d'orbignyi Payr. Mrs. Whishaw. Finely colored.

Euthria cornea L. Mrs. Whishaw. Nassa corniculum Oliv. A few.

Nassa corniculum raricostata Risso. Aperture violet.

Nassa incrassata Müll. A common orange-colored shell.

Nassa mutabilis L. Minor form.

Nassa reticulata L. Plentiful in muddy stations with the following :

Cyclonassa neritea L. Alive in vast numbers.

Cyclonassa pellucida Risso. A single specimen.

Columbella rustica L. Mrs. Whishaw, several.

Murex brandaris L. Apparently rare.

Murex erinaceus L. Many worn shells, seldom fresh.

Purpura haemostoma L. In a semi-fossil condition near Puerto Real.

Lotorium cutaceus L. The three of this family from fishermen.

Lotorium corrugatum Lk. Lotorium nodiferum Lk.

(*To be continued.*)